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Arizona's sick economy – a synopsis

By the summer of 1989, the weakness of the Arizona economy had become reasonably well accepted following a long period of denial. The prospect of continued slow growth for perhaps three to five more years was no longer a novel thought, though some, including a few economic forecasters, clung to the notion of a sooner, stronger recovery.

This article attempts to comprehensively, yet briefly, describe what happened to the Arizona economy, and in doing so, predict what is likely to occur in coming years. It pieces together information from a variety of articles, including one of the earliest predictions of the length and severity of the economic slowdown (*Arizona Business*, January 1988, pp. 9–10).

BACKGROUND

A variety of economic/demographic facts are important in understanding the current economic situation.

First, Arizona's economic and employment growth precedes its population growth by several months, thus is the preeminent factor to consider. The rate of population growth does feed back as a factor determining economic growth, however. (See *Arizona Business*, February 1989, pp. 1–4, for more details).

Second, not all jobs are equal (*Arizona Business*, August 1989, pp. 6–8). Besides the wage paid, the status of the job as basic or service-support is important. Basic industries — those that import money into Arizona in some way — include farming, mining, manufacturing, part of construction, tourism, federal government and military. Manufacturing is a classic example, because of its status as a fairly large, high-paying, goods-producing industry. In Arizona, because of rapid growth, construction takes on unusual importance; of all industries, it has the longest lead time and strongest relationship with future economic and population growth. Thus, manufacturing and construction probably are the two most important industries to watch.

How, why, prognosis

Third, the structure of the Arizona economy is similar to the national economic makeup, but with a key difference. Arizona's manufacturing industry is relatively small, concentrated in a few high-tech sectors. This small size is compensated by a large construction industry, particularly in the urban areas.

Fourth, economic and employment growth, and subsequent population gains, are highly cyclical. The Arizona economy closely follows the cycles of the national economy. However, local conditions can cause additional perturbations. Thus, not all cycles are the same. In particular, the current downcycle should not be compared to a typical downturn. Instead of being driven by national-international factors, the current slump was self-imposed (detailed later in this article).

Fifth, economic cycles — more severe in Arizona than elsewhere — are exaggerated by swings in community sentiment. This is most easily seen in variations in long-term population projections (*Arizona Business*, November 1988, p.3).

A SHORT HISTORY

The Arizona economy, coincident with the national economy, suffered through a recession in 1981–82. As is typical, job losses occurred in manufacturing and construction. For a short time, even the service-support sectors lost jobs.

As usual, the construction industry led the economy out of the recession. However, instead of being initially concentrated in the residential sector as in prior recoveries, commercial construction took off as well, in response to a federal tax law change in 1981.

The early part of the economic expansion, in 1983–84, was centered on the construction, manufacturing and service-support industries. Other basic industries — farming, mining, federal government — continued to experience problems that had begun in the early 1980s.

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By 1985, job growth in manufacturing tailed off as well, a worldwide recession in semiconductors and related products being the initial trigger. Arizona's boom was maintained almost strictly by construction/real estate and closely allied sectors. Despite the fastest economic and population growth on record, at least in the Phoenix area, warning signals — mostly in the form of rising vacancy rates — were already flashing. Community sentiment, however, pushed the boom along as optimism became stronger and more prevalent. Most of the community lost sight of reality and basic economic/demographic concepts, such as supply and demand. The hole in which the Arizona economy is now trapped was dug in the 1984–86 period.

The economic growth rate slowed somewhat through 1985 and 1986, but population growth remained very high. In 1986, construction's expansionary phase ended, stalled by very high vacancy rates and another change in federal tax laws. By this point, job creation in the basic industries slipped to only a few thousand (see Figure I). Economic growth was sustained by generally average-to-low-paying service-support sectors, particularly real estate.

As the construction slowdown intensified and the traditional time lag between employment and population passed, population growth slowed markedly in 1987. Net job creation in basic industries deteriorated further, ranging from barely positive to negative. Conditions stabilized for a few months, however, making the subsequent collapse all the more shocking.

The Arizona economy in 1988 was hit by numerous employee layoffs in a variety of industries, driving total job creation down to barely positive levels (see Figure II). Most of the job losses were in construction and real estate, though associated industries such as finance and public utilities also were hard hit. Though the slowdown began in 1986, many firms apparently held on as long as they could, hoping that conditions would improve and that downsizing and layoffs could be prevented. By 1989, construction had lost about 26,000 jobs from its mid-1986 peak, one-half of the number it had gained since the 1982 recession trough. Real estate positions — particularly non-wage and salary — probably were 20,000 more numerous by 1987 than could be sustained.

In addition, a number of major manufacturing firms announced layoffs in 1988. Most were in response to reductions in federal defense spending; much of Arizona's high-tech sector has government defense applications. After 1981, manufacturing had only a brief period of reasonably strong growth in 1983–84.

PRESENT SITUATION

Now that the dust has settled, it is clear that the boom of the mid-1980s was deceptive. It was impelled by an unsustainable construction-real estate binge that never was market-driven. Had this not occurred, the Arizona economy would have experienced slower growth than normal for an expansionary period, especially in 1985–86. The other basic industries simply were not contributing much to the state's growth.

Today's economic problems are twofold. First, the obvious fallout and inevitable decline from the overexuberant construction-real estate activity not only has affected those industries, but has rippled through the economy to affect virtually all service-support industries. Second, however, is the continuing weakness in nearly all of the other basic industries. Nothing is driving the Arizona economy.

Thus, Arizonans are faced with a long list of unappealing conditions, with few, if any, options available to achieve much improvement in the near-term. Overbuilding created high vacancy rates, which despite substantial contractions in new activity in many construction sectors, has left most vacancy rates stable or still rising. With supply and demand still far out of equilibrium, and considerable properties repossessed or otherwise in distress, huge pressures have been building on prices.

While the banking industry cannot be described as healthy, its condition is far better than that of savings and loans. Federal regulators control so many assets that they have considerable control over the fate of the Arizona real estate industry.

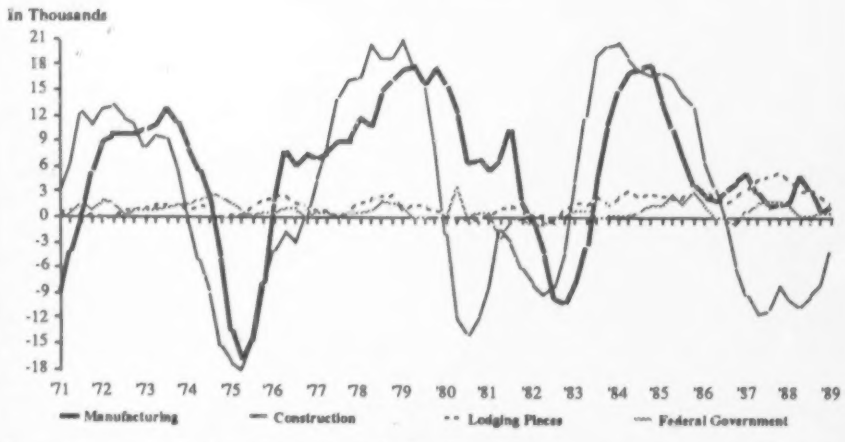
Business failures have not been limited to financial institutions. Record, yet still rising, levels of bankruptcies, foreclosures and business failures pervade Arizona.

With all of these problems, annual job growth dropped well below 20,000 during late 1988, though it has since recovered back to the 20,000 to 25,000 range. While still quite weak, the economy in 1989 is not doing as poorly as in spring-summer 1988. The net increase in basic jobs still is near zero, but job growth in other industries is positive, as it nearly always is.

Much of the Arizona workforce has been little affected by local conditions, meaning that their incomes have continued to rise. (Despite little job growth, manufacturing's personal income and gross product have continued to expand at moderate rates). Further, in-migration of retirement-age population and net natural increase have hardly slowed. These conditions are sufficient to keep the economy expanding, al-

FIGURE I

BASIC EMPLOYMENT – SELECTED INDUSTRIES
ANNUAL JOB CREATION



Source: Center for Business Research, College of Business, Arizona State University from Arizona Department of Economic Security data.

beit slowly, both in a historical perspective and in a national comparison.

A HISTORICAL PRECEDENT

The current episode is not unique in Arizona's recent history. Twenty-four years earlier, a similar cycle played out. Overbuilding, though restricted to residential real estate, accompanied by overoptimism and very high population projections characterized Arizona in the very early 1960s. The result was very high vacancy rates and a construction recession that, beginning in 1963, rippled through most of the economy.

The overbuilding was aggravated by the demographic cycle. Migration is largely a phenomenon of young adults, but the number of potential migrants declined in the 1960s because of low birthrates in the 1930s and early 1940s. This led to a slowdown in growth in the Sunbelt states; in Arizona it also meant fewer people available to absorb the excess housing units.

A similar situation aggravates today's problems. The baby-boom generation of 1946–64 meant a peak in young adults occurred in the mid-1980s. For years, the number of potential migrants will drop, resulting in less economic stimulus and less need to build dwelling units, particularly apartments and starter homes.

The 1960s period of slow growth lasted five years, occurring at a time when the national economy, including its construction industry, continued to perform well. The current downcycle, which began in 1987, could well last longer than five years, however. A key difference between the 1960s and 1980s slowdowns cannot be ignored. In the 1960s, growth in other basic industries, especially manufacturing, remained moderate to strong. Thus, the 1960s slow-growth period never was as severe as that experienced since early 1988.

THE OUTLOOK

Basic industries are the key to the Arizona economy's near-term course.

Manufacturing

Arizona's manufacturing industry remains plagued by layoffs. While defense procurements may stabilize, ending the job losses, a recovery is unlikely in the foreseeable future. Other manufacturing sectors — non-defense high-tech and dollar-sensitive export industries — are on downsides of booms, thus are unlikely to step up hiring at this late date. On net, manufacturing employment gains could accelerate modestly from the 2,000 per year level of recent years, but not enough to have much noticeable impact on the Arizona economy.

Tourism

A surge of resort construction resulted in fast growth of tourism jobs in recent years. Continued strong, but not better, performance is predicted for tourism. Thus, Arizona will be lucky if the industry continues to provide the stimulus it has had in recent years. Further, tourism has less impact than most basic industries because of its low wages.

Federal Government

Federal employment gains, including military, generally have been modest throughout the 1980s. Federal deficits and conservative politics suggest this situation will not change in the next few years.

Mining and Agriculture

Each industry has stabilized in the last couple of years, following losses through the mid-1980s. It would be highly optimistic to think that these small industries could improve to the point of having a significant impact on the state's economy.

Construction

Given high vacancy rates, low absorption and poor prospects in other industries, the chance of a recovery in this industry in the next couple of years is extremely slim. Further declines may not necessarily occur, but are possible in certain sectors. Vacancy rates should act as a leading indicator for this industry. They have a long way to drop before activity can accelerate appreciably.

Service-support

Declines in finance, real estate and public utilities may cease, but a recovery likely is well into the future. State and local government employment gains should remain modest. Services and trade should continue to create jobs at a moderate pace, but improvement in these sectors for the most part must wait until basic sector gains occur.

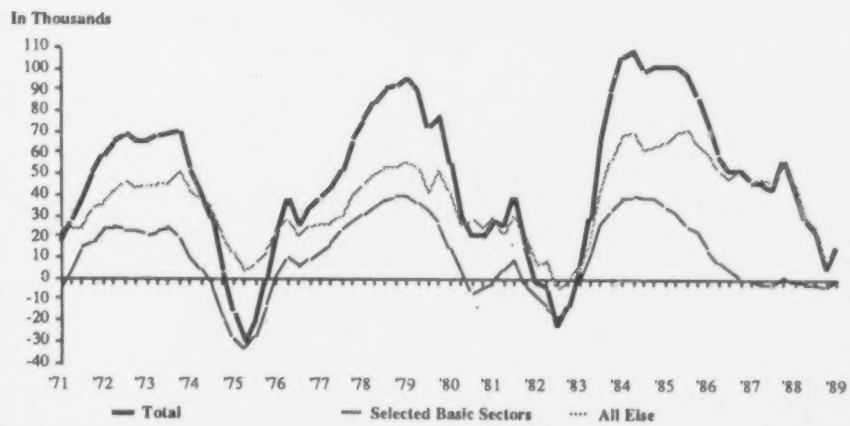
Summary

Removal of some of the negatives present during the last one and one-half years should have the effect of slightly raising economic growth figures. But gains will still be quite slow, with little hope for much more improvement in the next two years.

Significant downside risks are present, however. First, deterioration of national economic conditions would have a depressing effect on the local economy. The chance of an economic recession in 1990

FIGURE II

WAGE AND SALARY EMPLOYMENT
ANNUAL JOB CREATION



Source: Center for Business Research, College of Business, Arizona State University from Arizona Department of Economic Security data.

or 1991 cannot be dismissed. This would delay the onset of a strong recovery locally for another year, to about 1993.

Second, further worsening of local economic conditions could still occur. The Arizona Index of Leading Economic Indicators generally has been declining for months, signalling that economic conditions should weaken even more. Moreover, serious further deterioration of the real estate market could occur, usually expressed as a result of "dumping" of assets by federal regulators. Even without dumping, conditions could get worse before they get better.

Eventually, the construction-real estate sectors will reach equilibrium, fueling another economic expansion. By then, chances are good that other conditions will have changed. Gains in employment of existing manufacturing firms, an influx of new firms to the state, and/or an increase in federal spending may occur. If so, another strong economic expansion should result, but probably not until around 1994. Betting that such strength will be present prior to 1992 likely will be a losing proposition.

WHAT TO DO

For the Arizona economy to noticeably improve its performance in less than two-to-four years, it likely will need to attract more relocating firms than it already does. While a somewhat convincing rationale has been advanced for such moves — especially from California — the issue is more complex than stated (*Arizona Business*, February 1989, pp. 3–4). The current chances are small that enough firms will move in to stimulate the economy out of its malaise. The odds could be improved by certain actions, though even then not too much should be expected. But economic development — the old strategy of attracting relocating firms — seems to be the only hope.

Factors influencing corporate relocations and new plant sitings vary case by case, but some generalities can be made. Of greatest significance is the fact that the most important factors influencing manufacturing/distribution sitings are much different from those of headquarters, research and development, and high-technology facilities.

In the former case, Arizona compares favorably, as reflected by its rankings in most business climate studies, though some factors, such as proximity to customers, are beyond the state's control. If Arizona has not benefited from relocated manufacturing and distribution facilities as much as desired, it is probably due to a combination of factors, including its geographical location. In addition, fewer domestic relocations are occurring at the same time that competition for these firms is becoming greater and more sophisticated. Further, the state's economic development efforts may be deficient, by being fragmented and parochial, for example. Since last December, some action has been taken in this regard.

In the case of headquarters/R & D/high-tech operations, Arizona does not compare as favorably. First, two of the highest-ranked factors are out of the state's control: proximity to other company facilities and personal preferences of company executives.

Second, the top-ranked factor is quality of life, on which Arizona does not rank very high (40th in the Grant-Thornton business climate study, for example). At the top of the list of quality of life issues is education, followed by the environment. Education has a role in a couple of other factors as well — availability of professional and technical workers and proximity to a university.

Over and above any activities already underway to enhance the state's economic development is the need to improve the state's quality of life. Instead of positively addressing this issue, the state's inaction, budgetary problems and general unwillingness to spend effectively is causing the state's comparative quality of life to deteriorate.

– Tom R. Rex
Research Manager

Maricopa County dominates economic activity

Maricopa County's share of Arizona's economic activity is higher in most categories than its share of population. In 1988, 58 percent of the state's residents lived in the Phoenix area, but generally more than 67 percent of Arizona's economic activity occurred in its largest urban area. The Tucson area's share of population was 19 percent, but most economic portions were smaller. The 13 rural counties as a whole accounted for 24 percent of the state's population, but their economic shares frequently were less than 15 percent.

In no category did Pima County's share exceed 24 percent; the high was for 1988 federal expenditures. In a few cases, the Tucson area's share was less than 10 percent: wholesale trade sales in the 1987 economic census, 1987 agriculture gross product and earnings, and several types of 1988 building permits, including commercial and industrial dollar values.

Shares of economic activity in rural Arizona were more variable. Approximately one-half of the state's agriculture and three-fourths of its mining, whether measured by gross product, earnings or employment, can be traced to the rural counties. More than one-third of the federal government's presence — civilian and military — is outside the urban areas. In addition, 85 percent of the new mobile homes authorized in 1988 were in the rural counties.

In contrast, the rural area's share of most of the state's other economic activity was less than 15 percent, including that of the manufacturing, construction, services and FIRE (finance, insurance and real estate) industries. Rural area trade also is a relatively small proportion, especially wholesale.

The only categories in which Maricopa County's share is much below its 58 percent population portion is mining, building permits for mobile homes and two-to-four unit dwellings, and to a lesser extent, agriculture and federal government. It has a disproportionately large share of nearly all other economic activity.

– Tom R. Rex
Research Manager

Net migration figures still weak in second quarter

Net in-migration to the Phoenix area was approximately 6,000 in second quarter 1989, up a bit from the first quarter estimate of 5,000. However, in six of the nine latest quarters, net in-migration was between 6,000 and 8,000, well below the 11,000 per quarter long-term average.

Coupled with net natural increase, the total change in the Phoenix area population during the second quarter was 11,000. Statewide, the gain was approximately 20,000, split evenly between net migration and net natural increase. Annual changes were smaller than in the prior fiscal year (see Table 1).

NATIONAL MIGRATION

According to the Current Population Survey (CPS) conducted annually by the U.S. Bureau of the Census, the percent of the population moving from state to state has not changed much during the 1980s. However, though stable, the interstate mobility of the population in the 1980s has been less than historical figures.

Despite somewhat lower rates of migration, the number of interstate movers has not declined because of the constantly increasing size of the U.S. population. The annual number of interstate movers has been in the six to seven million range ever since 1963.

By Age

The CPS shows that mobility of all types is highest for young adults. For interstate migrants between 1986 and 1987, peak flows as a percentage of the population occurred for those aged 22 to 25, at approximately 6 percent. The entire 19 to 30 age bracket experienced flows of at least 4 percent. The next highest rates were for children three years old or younger, illustrating the movement of young families with parents aged in their 20s.

Beyond the age of 30, the percentage of people moving quickly declines with age, with rates dropping quite low beyond the age of 40. No upsurge occurs at retirement age; in fact, after remaining relatively stable between the ages of 45 and 63, the migration rate drops further at older ages, to less than 1 percent.

Interstate migration rates over the past four decades have not varied widely, but were clearly higher than average from 1963 into the early 1970s, and lower in the 1980s. The variation was least for older adults, but rather small for all ages older than 35. Little variation also was seen in the teenage, under 18, group.

Considerable variation in interstate migration rates has occurred over time among those aged 18 to 34, especially 20 to 24, and children less than 5 years old. The annual average rate of those between 20 and 24 was less than 6 percent in the 1980s, compared to 8 to 10 percent throughout the 1950s and 1960s.

These wide differences in migration rates can be explained by cohort size. Higher rates occur when the number of young people is relatively small, as occurred among those born in the 1930s and early 1940s. In contrast, the size of the baby-boom generation caused rates to be lower in the 1980s.

By Region

While total interstate mobility has been relatively constant, variations in regional flows have occurred in response to changing economic conditions. Net outflows from the Northeast became larger in 1986 and 1987, as inflows were lower and outflows higher than at any time in the 1980s. In contrast, net outflows from the Midwest had declined to minimal levels, corresponding to the area's industrial boom. This improvement largely came at the expense of the South.

In the West, migration flows in the 1980s were erratic, but no trend or cycle was discernable. During the same period, Arizona's migration flows were extremely cyclical, corresponding to the cyclicality of its economy. This illustrates that cyclical economic conditions are far more important in Arizona than elsewhere in determining the state's migration flows.

OUTLOOK

Given employment changes that already have occurred, migration flows in the third quarter should be similar to those in the second quarter, with net in-migration perhaps 1,000 higher in the Phoenix area. After that, however, the outlook worsens.

Construction employment is again declining, after brief stability in late 1988, and employment in other sectors, such as public utilities, finance and real estate, still shows weakness. In addition, frequent, sizeable declines in the Arizona Index of Leading Economic Indicators suggest that employment and economic gains will soften in coming months. At best, they will continue at present rates through early 1990. However, June's employment loss indicates that this slowdown has already begun.

Thus, net in-migration to the Phoenix area likely will remain around the 6,000 to 7,000 range of recent quarters, with occasional lower figures possible. The population figures presented in the February 1989 issue are updated in Table 1. The main difference is the downward revision in Maricopa County's net migration projection for mid-1989 through mid-1990. At this point, little reason exists to suspect that flows from 1990 to 1991 will be much different.

– Tom R. Rex
Research Manager

TABLE 1

POPULATION ESTIMATES AND PROJECTIONS
(In Thousands)

Fiscal Year	*Arizona*	*Maricopa*	*Pima*	*Non-urban*	*Arizona*	*Maricopa*	*Pima*	*Non-urban*
	Total Population				**Change**			
1988[E]	3,497	2,015	654	828	78	46	13	19
1989[E]	3,570	2,059	664	847	73	44	10	19
1990[P]	3,651	2,108	676	867	81	49	12	20
	Net Natural Increase				**Net Migration**			
1988[E]	37	22	6	9	42	24	7	11
1989[E]	38	22	6	10	35	22	4	9
1990[P]	39	23	6	10	42	26	6	10

E = estimate P = projection

Source: Center for Business Research, College of Business, Arizona State University.

Second quarter home sales, prices up slightly

The Maricopa County residential real estate market is now obviously in a recessionary cycle. However, the current slowdown in construction activity is what the area needs for future strength, given the condition of the economic and real estate markets.

Residential sales have halted their downward trend of the past year; sales increased slightly during second quarter 1989, but were considerably below the number sold during second quarter 1988 (see Table 1). The increase from first quarter 1989 was due primarily to the typical seasonal pattern and lower mortgage rates, rather than the beginning of the "recovery" of the housing market.

The median price of all single-family homes sold during the second quarter was higher than those sold during the prior quarter and during first quarter 1988. However, the higher price level was due to an increase in the size of the typical home purchased; the median price-per-square-foot of the homes sold did not rise.

NUMBERS OF SALES

The number of new single-family homes sold during second quarter 1989 totalled 2,260, up 4 percent from the prior quarter, but 22 percent lower than second quarter 1988. Existing home sales increased 10 percent from the prior quarter, but fell short of second quarter 1988 by 20 percent.

The number of townhouse/condos sold surged 8 percent from first quarter 1989's low level, but was 19 percent under the volume sold during second quarter 1988.

Mortgage rates, seasonality, larger homes responsible

Sales of new condos have been particularly weak during 1989.

Mortgage interest rates strongly impact home sales; during the last year, the number of homes sold has closely correlated with changes in the mortgage rate, with home sales slightly lagging mortgage rate changes (see Figure I). Mortgage rates are expected to remain low, enhancing the affordability of homes and therefore increasing the level of sales.

PRICE, SQUARE FOOTAGE, AND PRICE-PER-SQUARE-FOOT COMPARISONS

In general, the median price of new single-family homes has been relatively steady since first quarter 1988, ending slightly lower during second quarter 1989 at $104,456. The median square footage has remained fairly level (1,784 during second quarter), with a slight upward trend, resulting in a median price-per-square-foot of $58.75, 1 percent lower than in second quarter 1988.

Median price fluctuations have been slightly larger for resale single-family homes. The median price increased 6 percent from first quarter 1989 to second quarter 1989, to $79,356; however, the change from second quarter 1988 was only 2 percent. The median square footage has increased slowly to 1,520 square feet, resulting in a median price-per-square-foot of $53.50 during the second quarter, equal to the same quarter of the prior year. A greater proportion of the resale homes which sold during the second quarter were larger homes, and were more expensive due to the increased square footage.

The median price of existing townhomes has fallen each quarter since mid-1987, ending at $58,480 during second quarter 1989, down 6 percent from one year ago. The median resale townhome contained 1,125 square feet, and sold for $52.00 per-square-foot, down from $54.20 during the same quarter last year.

Prices have dropped more dramatically and more recently for new townhomes, displaying a change in the type of home being purchased. More new townhome buyers are purchasing smaller, less expensive homes. The median price during second quarter 1989 was $71,470, 14 percent lower than the prior quarter; the median townhome measured 1,125 square feet, 14 percent smaller than the prior quarter.

Notwithstanding new townhouses, many homebuyers seem to be purchasing slightly larger homes with more amenities, exerting upward pressure on the median price of all homes sold. However, the slow real estate market, as well as the increasing number of distressed properties (such as foreclosures) exert downward pressure on the price of an individual home. Many foreclosed homes have not yet entered the market, and hopefully will not be "dumped" in a short period of time, or sellers of existing homes may find it even more difficult to

TABLE 1

METROPOLITAN PHOENIX HOME SALES

	Single-family			Townhouse/Condominium			
Median Sales Price	*Resale*	*New*	*Total*	*Resale*	*New*	*Total*	*Grand Total*
First Quarter 1988	77,000	105,000	84,500	62,000	80,000	65,000	80,000
Second Quarter 1988	77,500	100,890	84,260	61,900	80,700	65,500	80,500
Third Quarter 1988	78,500	104,540	85,580	61,100	85,120	65,000	82,000
Fourth Quarter 1988	77,500	105,300	87,000	60,000	87,000	65,000	83,010
First Quarter 1989	75,500	105,290	84,500	58,780	83,110	62,000	80,000
Second Quarter 1989	79,360	104,460	85,960	58,480	71,470	61,900	81,500
Number of Sales							
First Quarter 1988	6,170	1,930	8,100	1,570	400	1,970	10,070
Second Quarter 1988	8,290	2,910	11,200	1,980	540	2,520	13,720
Third Quarter 1988	8,080	3,070	11,150	1,960	510	2,470	11,620
Fourth Quarter 1988	6,310	2,990	9,290	1,680	510	2,190	11,480
First Quarter 1989	6,020	2,180	8,200	1,570	310	1,880	10,070
Second Quarter 1989	6,630	2,260	8,890	1,640	390	2,030	10,920

Source: Arizona Real Estate Center, College of Business, Arizona State University, from data supplied by Real Estate Evaluation Group

sell their homes without agreeing to significant price cuts.

FORECAST

The future of residential real estate in the Valley is affected by many factors, both local and national. Before significant market improvement can occur, most of the factors which caused our current downturn must experience positive changes. Locally, crucial factors include population growth, especially net in-migration; job formation and employment growth; vacancy rates in all real estate sectors; business and personal bankruptcies; and foreclosures.

Our current low level of construction has resulted in fewer jobs and a slower real estate market, but a lower construction level is essential if the local market is to improve significantly. Vacancy rates should continue to improve slowly due to the lower level of construction, eventually allowing construction activity, employment growth, and population growth to increase.

Net in-migration is projected to be approximately 24,000 people during 1989 and 24,000–28,000 in 1990. The long-term average of 42,000 (still far less than the 1985 peak of 66,000) is not expected to be reached until around 1992 or 1993.

Employment growth will probably be slightly slower during the last half of 1989 than during the first half, begin to improve during 1990, and end the year at levels slightly higher than during the first half of 1989. Basic industries, which import money into the Arizona economy, will play the most important short-term role in Arizona's recovery.

As vacancy rates, in-migration, and employment growth begin to improve during the next one to two years, construction activity will increase modestly while foreclosures and bankruptcies decline. The local economy and the real estate market can then begin their slow recoveries, assuming the national economy does not impact the local area negatively.

National issues center around the strength of the U.S. economy — particularly inflation, mortgage interest rates, and the possibility of entering into a recession. Recessionary concerns are still valid, but the possibility of the Feds successfully pulling off a "soft landing" — wherein inflation is controlled and a recession is avoided — becomes more likely each month. Even though 1989's expected inflation of about 5 percent is greater than 1988's 4.1 percent, it is not much higher, and projections do not include significant increases.

FIGURE I

MORTGAGE INTEREST RATE VS. SINGLE-FAMILY HOME SALES
Maricopa County, 1988-89

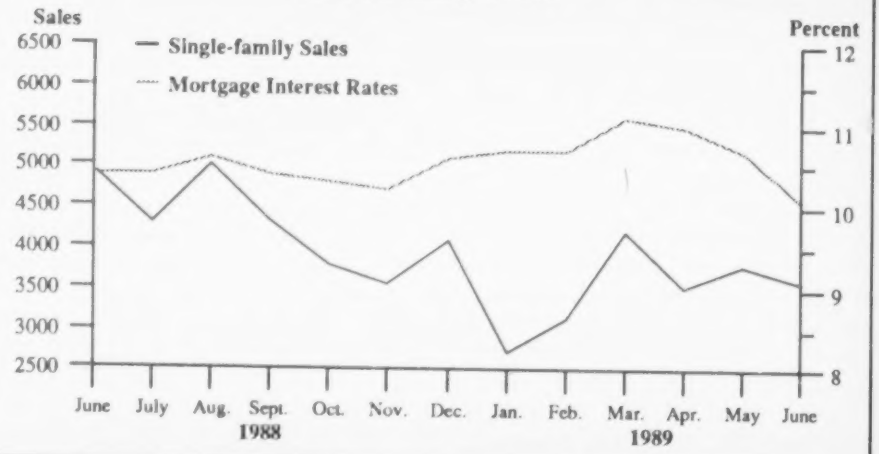
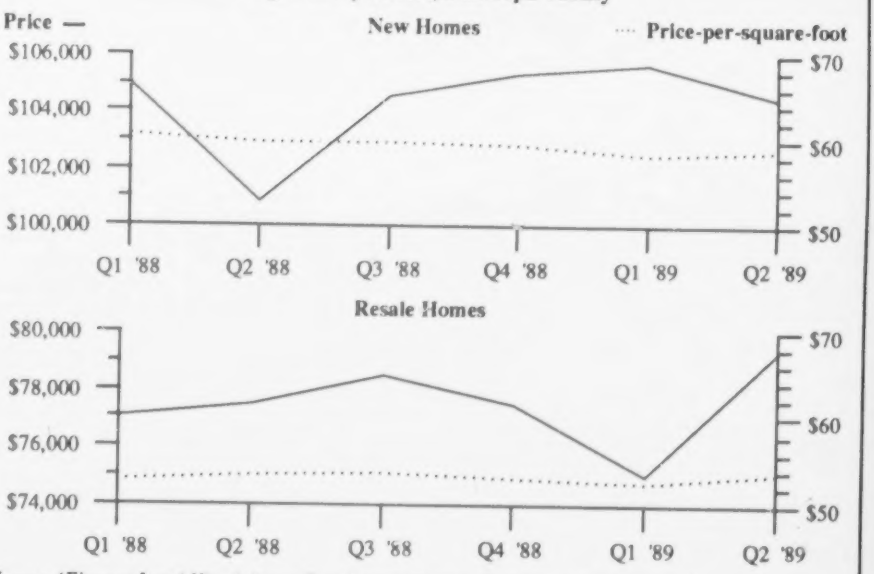


FIGURE II

MEDIAN PRICE AND MEDIAN PRICE-PER-SQUARE-FOOT
Single-family Homes, Maricopa County



Source (Figures I and II): Arizona Real Estate Center, College of Business, Arizona State University.

Local mortgage rates for both fixed-rate and adjustable-rate loans have been falling during 1989. Mortgage rates in July 1989 for 30-year, fixed-rate loans were lower than they had been since early 1987. Slightly lower rates are probable for a short time, but then rates can be expected to rise slightly, remaining lower than 1988's rates throughout 1989.

When all factors are considered, though further minor declines in construction and sales are possible, slow improvement can be expected over the next 2 to 4 years. A significant recovery can occur only when vacancy rates fall and economic conditions lead to greater levels of employment and population growth. Until then, other sectors of the economy, such as manufacturing, will need to supply the stimulus for growth.

– **Sharla Kivett,** *Research Analyst*
Arizona Real Estate Center

Services industry expanded rapidly in 1980s

Arizona's services industry grew quickly between 1982 and 1987 according to the 1987 Census of Service Industries conducted by the U.S. Bureau of the Census. During these five years, receipts of service firms more than doubled, though population growth amounted to only 18 percent and inflation totaled just 19 percent.

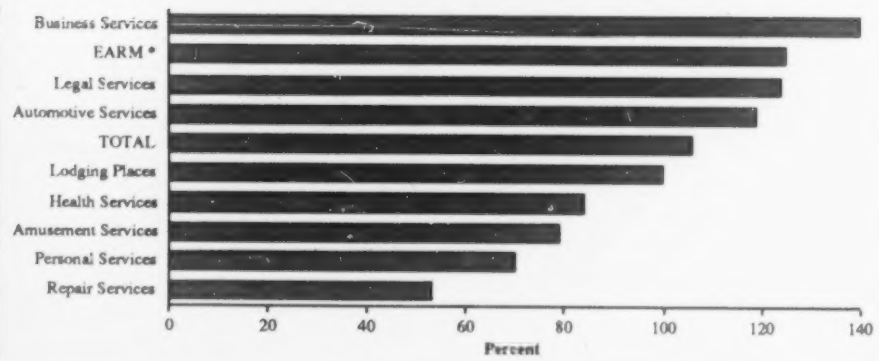
The total payroll of service firms rose even more than receipts (109 v. 106 percent). Employment advanced 62 percent, far in excess of population growth, while the average payroll per employee climbed 29 percent, translating into real salary gains. The number of establishments increased 36 percent.

These data are for firms with payroll subject to Federal income tax. Firms exempt from the tax, a much smaller number, did not expand so rapidly.

Sales of each of the major categories of the services industry increased at rates exceeding the combined population and inflation rates. Business services grew the most, with receipts rising 140 percent (see Figure I).

FIGURE I

SERVICE INDUSTRIES
1982-87 Percent Change in Receipts



*Engineering, accounting, research, management and related services

Source: 1987 Census of Service Industries, Arizona, U.S. Bureau of the Census.

TABLE 1

1987 CENSUS OF SERVICE INDUSTRIES, ARIZONA

Firms Subject to Federal Income Tax	*Establishments*	*Receipts in Millions*	*Payroll in Millions*	*Employment*
TOTAL	25,250	$10,639	4,011	243,999
Hotels/lodging places	833	1,073	302	34,345
Personal services	2,655	454	167	17,416
Business services	4,180	2,165	802	61,490
Automotive repair, services, parking	2,370	865	200	14,595
Miscellaneous repair services	968	272	83	4,774
Amusement and recreation services	1,135	524	128	14,731
Health services	6,459	2,571	1,093	43,849
Legal services	1,890	889	432	11,513
Engineering, accounting, research, management, and related services	3,593	1,497	671	29,807
Firms exempt from federal tax	2,020	3,241	1,328	75,849

Source: 1987 Census of Service Industries, Arizona, U.S. Bureau of the Census.

BY CATEGORY

Based on receipts, the largest of the services sectors was health services, accounting for $2.6 billion of the industry's total $10.6 billion. Business services was next at $2.2 billion, followed by EARM (see Table 1). Employment in business services, however, was greater than that in health services.

Receipts per service establishment averaged $421,000 in 1987. Firms in the hotels and other lodging places category were the largest on average, with $1.3 million in receipts per establishment. The lowest figure, $171,000, was in the personal services category. Similarly, employment per establishment was much higher in the lodging places category than overall (41 v. 10). Miscellaneous repair services employed the fewest workers per firm (5).

The sectoral ranking of receipts per employee, however, was much different, with legal services leading the categories at $77,000, considerably more than the $44,000 average. Personal services again were lowest at $26,000.

The average payroll per employee had a wide range, from $37,500 in legal services to $8,700 in the amusement and recreation services category. Salaries were also quite low in the lodging places and personal services groupings, but were relatively high in the health services and EARM.

BY SUBCATEGORY

More than three-fourths of the receipts in the hotels and lodging places category came from hotels, even though the number of motels greatly exceeded the number of hotels. In the personal services grouping, laundry services and beauty/barber shops were the two largest subcategories.

A number of subsectors comprise the business services category. Computer-related services was the largest. Others included personnel supply services and equipment rental.

Auto repair and auto rental are the two largest components in the auto services category. Other than electrical repair shops, no subsector of the miscellaneous repair services category is very large. The amusement and recreation services category also includes a variety of small subgroups, including movie theaters, produc-

tion of movies, and commercial sports.

Doctor's offices made up more than one-half of the health services category. Because so many are non-profit, hospitals accounted for only a small portion of this category. Almost one-half of EARM's receipts came from engineering services. Accounting services and management/public relations services were also sizeable.

BY COUNTY

Service firms were disproportionately common in the Phoenix metropolitan area, with 66 percent of Arizona's establishments and 73 percent of the state's receipts. The Tucson area's share, about 19 percent, was equal to its population share, leaving smaller shares in rural Arizona than its population would suggest.

Maricopa County's 16,684 establishments employed more than 170,000 and made receipts of $7.8 billion in 1987. In Pima County, service establishments numbered 4,703, employed 48,700, and had receipts of $1.9 billion. Among the rural counties, Coconino's figures were the highest (receipts of $220 million and employment of nearly 4,900) except in number of establishments, where Yavapai led with 692. Other rural counties with receipts of at least $100 million included Yuma and Mohave.

Per capita receipts varied sharply by county. A strong relationship exists between total receipts and per capita receipts; that is, those counties with a higher concentration of service firms draw customers from outside the area. Per person figures were more than $3,900 in Maricopa County and nearly $3,000 in Pima County. In the rural counties, the figure ranged from Coconino's $2,400 to only about $100 in Greenlee County.

These per capita figures are influenced by a number of factors, including the degree of tourism, number of seasonal residents, income levels of residents, and market areas of firms. Per capita receipts are lower in rural counties not only because of low incomes, but also because population density frequently does not allow for local operation of a service business. Rural residents often must travel to larger population centers to obtain the service.

Tourism's effect was particularly seen in Coconino County, where per resident receipts in the lodging sector were about three times higher than in any other county. Amusement and recreation receipts per capita also were the highest in Coconino County.

BY CITY

Per capita 1987 receipts varied noticeably among Arizona's larger cities in 1987. Scottsdale enjoyed the highest level at $6,300, largely a result of very high receipts in the lodging category. However, Scottsdale also led or was near the top in per capita receipts in business services, health services and EARM. The city of Phoenix was next overall, at $5,400, leading the way in the legal services and business services categories. Tempe and Tucson were next, with Tempe especially high in business services and Tucson particularly strong in health services.

The lowest receipts per capita among larger cities occurred in Glendale, which ranked near the bottom in every category. Total receipts in Glendale were not that much higher than in Flagstaff, a city not even one-third the size. Mesa's per capita receipts also were relatively low, though its total receipts were fourth highest in the state, 6 percent of the state total. In contrast, Phoenix accounted for 47.5 percent of the total. Tucson ranked second at 15 percent.

– Tom R. Rex
Research Manager

Arizona's population will remain primarily White

The proportion of Arizona's population that belongs to a minority group rose only slowly between 1980 and 1985, according to experimental racial population estimates by the U.S. Bureau of the Census.

Contrary to statements that Arizona will be dominated by minority groups at some point in the not-too-distant future, Arizona's population is, and will continue to be, primarily White. While the net natural increase of minority groups is more rapid than that of Whites, most of Arizona's population growth derives from migration, which is primarily of Whites.

The Census Bureau estimates that the share of the non-Hispanic White population declined less than one percentage point between 1980 and 1985 in Arizona — from 74.2 percent to 73.4 percent. Even if this trend accelerates somewhat, two-thirds of the Arizona population will still be non-Hispanic Whites 20 years from now.

The number of Hispanics in Arizona — some 533,000 in 1985 — was eighth highest among the 50 states. The 16.8 percent share was fourth highest, but was barely higher than the 1980 share of 16.4 percent.

Arizona's Hispanic population grew less rapidly than the national average between 1980 and 1985. Much of the growth nationally came from immigration from other nations. These people settled primarily in Florida, California and New York.

Though the proportion of Hispanics is higher in Arizona's southern rural counties than in its metropolitan areas, the urban Hispanic population grew more rapidly between 1980 and 1985. In the Phoenix area, the proportion rose from 13.3 percent to 13.8 percent. Comparable figures for the Tucson area were 21.1 to 22.1 percent.

The proportion of Arizona's population that is Black rose only from 2.7 to 2.9 percent between 1980 and 1985. Nationally, the gain also was small, but the share was much larger — 12.1 percent in 1985.

The percentage growth rate of Blacks in Arizona was one of the fastest in the nation, thanks to strong net in-migration. But the numeric gain was small, as the total population was just 91,500 in 1985.

People of other races — primarily American Indians and Asians — made up nearly 7 percent of Arizona's 1985 population, up only slightly from 1980. This group, numbering approximately 220,000 people, was the eighth largest in the nation.

The growth rate of the other races category in Arizona was slower than the national average. Most of the growth nationally came from immigration of Asians from other nations, but Arizona received relatively small numbers of these peoples. A large portion of the other races category in Arizona is made up of Indians living on reservations.

– Tom R. Rex
Research Manager

Economic growth generally weak in May

Weak economic gains persisted across most of Arizona in May, according to the coincident economic indexes. The index for Pima County rose 0.2 percent for the second consecutive month (April's gain was revised down), with the index reaching 137.0 (1982 = 100). Rural Arizona's gain in May was just 0.1 percent, putting the index at 133.1. The advance in Maricopa County was much larger — 1.2 percent to 150.3 — but was misleading and followed two consecutive months of 0.1 percent increases.

The Phoenix area's large gain in May resulted primarily from the greatest improvement in the unemployment rate on record; the rate reached its lowest level since 1984. The improvement, however, probably reflects sampling error and/or unemployed dropping out of the labor force, rather than economic strength. Further, preliminary data for June show the situation deteriorated. The commercial building permit component, which contributed to May's increase, merely rebounded from very low values in March and April.

The unemployment rate improved elsewhere in the state in May, but not by as much. Employment dropped, except for a modest gain in the Phoenix area. Retail sales were little changed, as were building permits outside the Phoenix area.

During the first five months of 1989, total gains were approximately 2 percent in rural Arizona and Maricopa County, well below average for the latter area. In the Tucson area, the increase was only 0.4 percent. Improvements in the unemployment rate were the biggest stimulus, though employment rose in the Phoenix area and rural Arizona. Commercial building permits declined in the metro areas.

Preliminary data for June suggest that the coincident indexes declined statewide. Improvements in the unemployment rate were reversed and employment levels declined, especially outside the Phoenix area.

TABLE 1

COINCIDENT ECONOMIC INDEXES
Monthly Percent Change

	Maricopa	Pima	Non-urban	Arizona
January 1988	-.3	-.7	-.5	-.4
February	.1	.2	.2	.2
March	.4	-.2	.8	.4
April	-.4	-1.2	-1.4	-.7
May	.2	-.9	-.1	-.7
June	-.5	0.0	-.2	-.3
July	.6	.2	-1.0	.3
August	.3	.5	.5	.4
September	-1.1	.3	.7	-.6
October	.2	.9	1.2	.5
November	.7	1.0	1.4	.9
December	.5	.3	.3	.4
January 1989	.3	.2	.5	.3
February	.5	-.8	0.0	.2
March	.1	.5	1.0	.3
April	.1'	.2'	.4	.2'
May	1.2	.2	.1	.9

' Revised
Source: Center for Business Research, College of Business, Arizona State University.

– **Tom R. Rex**
Research Manager

Purchasing indicators barely move in July

The Arizona economy saw only marginal growth in July, matching almost exactly the previous month's anemic performance. While new orders received and employment were only barely positive, production registered a fairly strong increase — the highest in the last three months. While production growth will help stimulate the economy, it cannot be sustained unless new order bookings pick up. The good news is that the rate of inflation continues to moderate; July saw the lowest price increase rate in more than two years (since March 1987).

Continued slow economic growth and moderate inflation can be expected over the balance of 1989. With inflation now at a stable or declining rate, due to the actions of the Federal Reserve in keeping interest rates at a high enough level to reduce demand, interest rates now can be lowered as needed to stimulate demand and avoid a recession.

TABLE 1

JULY PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (July compared to June)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	32	60	8
Delivery time from vendors	23	69	8
Purchased materials inventory level	26	39	35
New orders received	34	33	33
Production	38	39	23
Employment	26	50	24
Purchases	36	33	31

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona and the Northern Arizona Group.

– **Harold Fearon**

Dr. Fearon is the National Association of Purchasing Management Professor in the ASU College of Business.

Arizona leading index moves higher in June

The Arizona Index of Leading Economic Indicators increased in June to 117.5. The June number was .5 percent higher than the 116.9 number for May 1989 and 2.4 percent below the June 1988 number of 120.4 (1982 = 100).

Residential building permits, money supply, employment, hours worked, and inventories were positive influences. Sensitive prices and delivery times were negative influences. New orders and production were unchanged this month.

ANALYSIS

The money supply was a drag on the index for nine of the last twelve months as a result of Federal Reserve efforts to cool down the national economy. This month, the money supply became a positive influence, evidence that the Federal Reserve has indeed switched gears and eased credit in an attempt to prevent a national recession. These actions by the Federal Reserve will hopefully lead to a "soft landing" for the national economy and avoid a recessionary "crash." The Arizona economy would not fare well if the national economy is thrown into a recession.

The other national indicator in the Arizona index — the change in the sensitive materials price index — has been negative for the last three months and points to a slowing of demand. In fact, falling sensitive materials prices were the major contributor to the drop in the national leading index for May and June. This two-month drop in the national leading index is considered further evidence that the national economy is cooling.

OUTLOOK

Interest rates have already fallen as a result of the Federal Reserve's easing of credit. This trend to lower interest rates is reinforced by the signing of the S&L bailout bill. Ailing thrifts which had to pay more to attract deposits will eventually be eliminated. Lower interest rates should help bolster both the national and local economies and may provide the cushion for the much sought after "soft landing." The duration and severity of any national slowdown will likely be the deciding factor in determining the course of Arizona's economy in the near future. The recent downward trend in the Arizona leading index suggests continued weakness in the state economy over the next several months, but stops short of an outright recession signal.

– Tracy L. Clark, *Economist*
Economic Outlook Center

FIGURE 1

ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

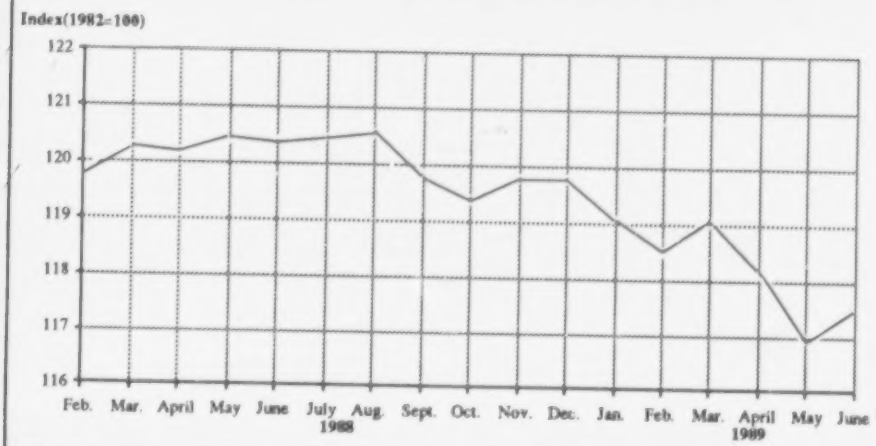


TABLE 1

NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

	Net Contribution*			
	Mar.	*Apr.*	*May*	*June*
Delivery Time*	.09	.05	–.09	–.02
Inventory Levels*	–.09	.08	–.14	.09
New Orders*	.12	.09	–.11	.00
Production*	.09	.08	–.08	.00
Employment*	.08	–.05	.00	.12
Residential Building Permits	.32	–.40	–.03	.23
Average Workweek, Manufacturing	.00	–.07	–.10	.10
Money Supply	–.08	–.32	–.41	.20
Change in Sensitive Materials Prices	.04	–.11	–.18	–.18
OVERALL INDEX CHANGE (%)	.56	–.73	–1.15	.54

*The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

*Based on indicators from the Purchasing Management Associations of Arizona and southern Arizona.

Source: Economic Outlook Center, College of Business, Arizona State University; sponsored by Citibank (Arizona).

The Arizona leading index is based on 9 economic indicators, combined and weighted to project the pace of economic activity several months ahead. Five of the components come from a monthly survey of Arizona purchasing managers conducted by Dr. Harold Fearon. The Arizona Index of Leading Economic Indicators is sponsored by Citibank (Arizona).

ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT (In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	4th Qtr.	61.103	1.7	5.0	NA	NA
Arizona - 1982 Dollars	4th Qtr.	48.005	0.0	0.9	NA	NA
COINCIDENT ECONOMIC INDEXES (1982 = 100)						
Arizona	May	144.9	0.8	3.3	NA	NA
Metropolitan Phoenix	May	150.3	1.2	2.9	NA	NA
Metropolitan Tucson	May	137.0	0.2	3.6	NA	NA
Non-urban Arizona	May	133.1	0.1	5.1	NA	NA
CONSUMER PRICE INDEX (1982-84 = 100)						
Metropolitan Phoenix	2nd Qtr.	125.9	1.8	5.0	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1982 = 100)						
Arizona	June	117.5	0.5	-2.4	NA	NA
BUILDING PERMITS (Total Dollar Value in Thousands)						
Maricopa County	May	241,601	19	-35	1,149,447	-20
Pima County	May	21,240	-17	-47	134,537	-39
Balance of State	May	56,563	-20	-25	285,286	1
Arizona	May	319,404	6	-35	1,569,270	-19
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	May	1,376	24	-31	6,071	-36
Pima County	May	226	21	-18	1,124	-57
Balance of State	May	901	-9	-2	4,315	5
Arizona	May	2,543	9	-22	11,510	-29
HOME SALES						
Maricopa County - Number	June	3,720	-18	-15	22,540	-8
Maricopa County - Median Price	June	82,950	3.8	2.9	80,000	0.1
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	1st Qtr.	88	-3.3	0.0	NA	NA
Metropolitan Phoenix - Resale Homes	1st Qtr.	124	0.8	2.4	NA	NA
MORTGAGE INTEREST RATES (Conventional, 30-year, Fixed-rate)						
Maricopa County	July	9.9	-2.0	-4.8	NA	NA
POPULATION ESTIMATES (In Thousands)						
Maricopa County	1st Qtr.	2,048	0.5	2.0	NA	NA
Arizona	1st Qtr.	3,550	0.5	2.0	NA	NA
ELECTRICAL POWER SALES (In Millions of Kilowatt Hours)						
Arizona	May	3,775	9.6	5.9	17,058	7.4

NA = Not Applicable

Source: Center for Business Research, Arizona Real Estate Center, and Economic Outlook Center, College of Business, Arizona State University.

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